

AMENDMENT TO SPECIFICATION

Please amend the specification as follows:

Replace the paragraph beginning on page 6, line 14 and ending on page 7 line 2 with the following paragraph:

For illustration purposes, Figs. 2 and 3a show a five bit encoder pad. The optical sensor 25 outputs a binary-coded decimal (BCD) or four bit word gauge signal. Preferably, the conditions of the cells 43 (e.g. transparent or opaque) are arranged to produce four bit binary code or BCD code. Depending on the condition of the cell 43, each photodiode 57 circuit will output voltage corresponding to a binary 1 or 0. Thus, a different four bit word or BCD code is generated for each encoder array 37. For example, with a four bit configuration, sixteen unique points of resolution are readable (0000-1111). With a five bit configuration, thirty-two unique points of resolution are readable. For example, if a different level of resolution is required (i.e. more or less), the optical rotary position encoder 21 may be configured with more or less photoemitters 51, photodiodes [[55]] 57, cells 43, and encoder arrays 37, outputting a larger or smaller bit word

Replace the paragraph beginning on page 7, line 3 and ending at page 7, line 20 with the following:

Fig. 4 illustrates the communications functions of the gauge 11. The gauge 11 provides a gauge signal 27 based on the output of the photoemitters 51 and beams 61 detected by the

photodiodes 55. The gauge signal 27 is sensed by a microcontroller or sequencer 63. The microcontroller or sequencer 63 receives and interprets the gauge signals 27, generates command signals 65 for powering the optical sensor 25 or powering or driving the first transmitter or transceiver 67 and for generating at least one more of the transmitted sense signals 69 for transmission by the first transmitter or transceiver 67. The first transmitter or transceiver 67, being driven by the microcontroller or sequencer 63 communicates with a remote transmitter or transceiver 71, and either conveys the transmitted sense signal 69 to the remote transmitter or transceiver 71 or receives a request for the microcontroller or sequencer 63 to monitor the gauge signal 27 and convey it by a translated sense signal 69. The remote transmitter or transceiver 71 can be coupled with a wireless network 73, a wired network ~~[[74]]~~ 77, or a combination thereof 76 to ultimately communicate with the user interface 75. The remote transmitter or transceiver 71 can also be coupled with a wired network 77 such as a wire telephone network to achieve ultimate communication with the user interface 75. Alternatively, the remote transmitter/transceiver 71 can be directly wired with the user interface 75 so as to complete the communication link. Dual tone multi frequency (DTMF) method of communication may be used to convey the information to the user interface 75.